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Revision 1

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SPIDER ™

1:2 DVI Distribution Amplifier (OVD12)
1:5 DVI Distribution Amplifier (OVD15)

User's Manual

Unpacking

Each **SPIDER™** DVI Distributor package includes the following items;

OVD12 or OVD15 SPIDER™ DVI Distribution Amplifier Unit
One (1) 5V, 2A Power Supply Adapter
User manual

Troubleshooting

Problem	Solution
Distribution Amplifier not operating	Make sure the 5V power is plugged in the back of the unit. Check to see if the power LED light is on.
No picture(or signal) Or Poor picture	1. If you are using copper based DVI cable, overall length of the cables (length of the cable from video source to switch and length of the cable from switch to display) should not exceed 20ft. Exceeding 20ft. with copper based cables will result in no or poor picture quality. To extend beyond 20ft, please use fiber optical DVI extension cables such as Opticis Model M1-1P0 cables. 2. Use high quality DVI cables. 3. If you are using computers, try other refresh rate settings. Most HDTVs have refresh rate of 48Hz and computer's video cards are usually set at higher refresh rate. Try lower refresh rates. 4. Make sure all DVI connectors are tightly secured to all DVI ports. loose screws on the DVI connectors will result in no or poor picture. 5. Turn off all equipments(video source, switch and HDTV) and restart all equipments.
Incorrectly sized picture / resolution or No picture	Please remember that your video source will only support one resolution setting. To connect 1600x1200 resolution display and 800x600 resolution display, the resolution setting of your video source must be set to the lower resolution setting (800x600) OR, turn on DDC for the 800x600 display and turn off DDC for 1600x1200 display.

Warranty Information

1 (One) Year Warranty
Opticis warrants **SPIDER™** OVD12 and ODV15, DVI Distribution Amplifiers to be free from defects in workmanship and materials, under normal use and service, for a period of one (1) year from the date of purchase from Opticis or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Opticis shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Opticis.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the reminder of the initial warranty period, whichever is longer.

Optics shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to Optics for repair under warranty or not.

Warranty Limitation and Exclusion
Opticis shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Opticis or its authorized agents, causes other than from ordinary use or failure to properly use the Product in the application for which said Product is intended.

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Description, General Specification

. **SPIDER™** OVD12 and OVD15, DVI Distribution Amplifiers, allow one digital video sources to be spilt into multiple digital displays. The built-in amplification function enables DVI signal distribution without signal loss

ITEM	DESCRIPTION	DESCRIPTION
Model Name	OVD12	OVD15
Input Signal	DVI (TMDS),Single Link	DVI (TMDS),Single Link
Output Signal	DVI Single Link , 2port,	DVI Single Link , 5port
Resolution	VGA / SVGA / XGA /UXGA 480i/p , 720i/p , 1080i/p	VGA / SVGA / XGA /UXGA 480i/p , 720i/p , 1080i/p
Receptacle	DC Power Jack DVI	DC Power Jack DVI
Power Consumption	DC +5V , 2.7W Max	DC +5V , 4.3W Max
Dimension	230 X 120 X 34 mm	370 X 120 X 34 mm

Technical Specification

Frequency bandwidth: 1.65 Gbps (Single Link)
Supporting Graphic Resolution: UXGA (1600 X 1200 at up to 60Hz)
(1920 X 1080 at up to 60Hz)
Inputs: DVI-I Female ports
Output: DVI-I Female port (OVD12/ 2 ports, OVD/ 5 ports).
Power supply: DC 5V, 1A Adapter included.

Connector Pin Assignment
DVI-I Input, Output

Part No.	Pin No.	Description	Remarks
DVI-I 29pin	1	TMDS DATA 2M	
	2	TMDS DATA 2P	
	3	TMDS DATA 2/4 Shield	
	4	TMDS DATA 4M(N.C)	
	5	TMDS DATA 4P(N.C)	
	6	DDC Clock	
	7	DDC Data	
	8	N.C	
	9	TMDS DATA 1M	
	10	TMDS DATA 1P	
	11	TMDS DATA 1/3 Shield	
	12	TMDS DATA 3M(N.C)	
	13	TMDS DATA 3P(N.C)	
	14	5V	
	15	GND	
	16	Hot Plug Detect	
	17	TMDS DATA 0M	
	18	TMDS DATA 0P	
	19	TMDS DATA 0/5 Shield	
	20	TMDS DATA 5M(N.C)	
	21	TMDS DATA 5P(N.C)	
	22	TMDS DATA Clock Shield	
	23	TMDS Clock P	
	24	TMDS Clock M	

Mechanical Specification

[Dimensions]

OVD12: 230 X 120 X 34 mm
OVD15: 370 X 120 X 34 mm

POWER: DC 5V Input

DVI IN: DVI-D Input Signal

DVI OUT CH1~5: DVI-D Output Signals

Environmental and Reliability Specifications

1 Operating Conditions
- Temperature : 0? ~ 50?
- Humidity : 10% ~ 80%, non-condensing
- Altitude : maximum 3,000m

2 Transportation Conditions
- Temperature : -25? ~ 60?
- Humidity : 5% ~ 95%, non-condensing
- Altitude : maximum 15,000m

3 Storage Conditions
- Temperature : -20? ~ 60?
- Humidity : 5% ~ 95%, non-condensing
- Altitude : maximum 3,000m

4 Reliability Specifications

MTBF: more than 50,000 hours at 90% confidence level
Reliability specification and items: refer to “Specification of reliability test for LCD monitor ”

Main Features

High Quality Picture - No Signal Loss and Digital Noise Free

Our Distribution Amplifiers are built to deliver the highest quality picture preserving the native resolutions of the video sources without any signal loss. At the same time, the digital noises that may affect the picture quality will be eliminated. Due to the nature of the digital signals and passing through multiple stages of connection when using distribution amplifiers, it is important to eliminate the digital noises and boost the signal strength to preserve/enhance the video signal quality.

Signal Amplification for signal reliability and long length signal transmission.

Our 5V power adapter supplies adequate power to amplify the video signals from the video source. This is necessary as the overall length from the video source to the displays is longer when using the distribution amplifiers (distance from the video source to the distribution amplifier + distance from the distribution amplifier to the display). In most cases, the overall distance that the DVI signal will need to travel is over 10ft. Due to the nature of DVI signals, amplification is necessary to warrant the video quality and reliability. (Without amplification, there may be occasional blackouts or blinking effects) With this amplification feature, your video display can be extended up to 2300ft using our fiber optical DVI cables.

Video Connection

1. Connect your video source's DVI output port to the OVD12/OVD15 DVI input port using standard DVI cables (not included). Make sure all your DVI sources and the displays are turned off before connecting the cables.
2. Connect your DVI display's DVI input port to OVD12/OVD15 DVI output port. Make sure your DVI display is turned off before connecting the cables.
3. Plug the 5V power supply into the switch's power input port.
4. Plug the 5V wall mount power supply into the wall outlet.
5. Turn on your displays.
6. Turn on your video source.